

CLAIMS

What is claimed is:

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- 1 1. A method comprising:
 - 2 receiving real-time data at a personal computer implementing a general
 - 3 purpose operating system;
 - 4 generating a real-time event at the personal computer;
 - 5 determining whether the real-time event has a higher priority than a first
 - 6 event being processed at the personal computer; and
 - 7 if so, processing the real-time event.
 - 1 2. The method of claim 1 further comprising continuing to process the first
2 event if the real-time event does not have a higher priority than the first event.
 - 1 3. The method of claim 1 further comprising:
 - 2 saving the state of the first event at the personal computer prior to
 - 3 processing the real-time event; and
 - 4 processing the prior event after processing of the real-time event has been
 - 5 completed.
 - 1 4. The method of claim 1 further comprising:
 - 2 receiving a second event while processing the real-time event; and
 - 3 determining whether the second event has a higher priority than the real-

4 time event.

1 5. The method of claim 4 further comprising:
2 continuing the processing of the real-time event if the second event does
3 not have a higher priority than the second event.

6. The method of claim 4 further comprising:
5 terminating the processing of the real-time event if the second event has a
higher priority; and
processing the second event.

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Sub A² 7. A computer system comprising a central processing unit (CPU), wherein
the CPU operates according to a general purpose operating system adaptable to
10 execute real-time instructions.

Sub B1 8. The computer system of claim 7 wherein the CPU comprises:
a timer to generate timing signals at predetermined time intervals; and
an event mechanism coupled to the timer to generate real time events.

15 9. The computer system of claim 8 wherein the CPU further comprises an
event handler coupled to the event mechanism to process real-time events.

10. The computer system of claim 9 wherein the CPU further comprises a
register coupled to the event mechanism to store real-time data.

11. The computer system of claim 9 wherein the event mechanism determines

